

### **DETAILED ACTION**

1. Applicant's response along with the Request for Continued Examination (RCE) filed on 02/08/2008 has been fully considered. Claim 6 is amended, claim 1-5, 7 and 9 was canceled, and claims 6 and 8 are pending.

### ***Claim Objections***

2. Claim 8 is objected to because of the following informalities: It is not clear if the amorphous silicate is contained in the base paper or in the coating layer provided over the base paper. Appropriate correction is required. In order to expedite prosecution the Examiner interprets claim 8 as follow: the amorphous silicate to be contained in the base paper.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kai et al. (JP 2002-088679) in view of Matsumura et al. (JP 2002-161494), Ryu et al. (US 2001-288690) and Shay et al. (US 5,478,602).

5. Claim 6: Kai teaches a coated paper for gravure printing provides a coated layer having pigment and an adhesive on a base paper. The coated paper for gravure printing

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is characterized by providing a coated layer containing 50 parts by weight or more (based on 100 parts by weight pigment) of kaolin as the pigment, having particle diameter distribution contained in an amount of  $\geq 65\%$  in a range of 0.4-4.2  $\mu\text{m}$  based on volume (abstract). Kai further teaches that an organic pigment may be contained in the coating composition [0014]. Kai does not teach a hollow pigment as the organic pigment.

6. Matsumura teaches a gravure printing paper containing a paper and a coating layer containing a hollow organic pigment provided on the paper (abstract). The hollow pigment has a particle size of 0.2-0.5  $\mu\text{m}$  [0011], and is contained in an amount of 5-20 parts by weight [0016].

7. Kai and Matsumura are analogous art because they are from the same field of endeavor that is the gravure coated paper art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the hollow organic pigment of Matsumura with the invention of Kai, and the motivation would be, as Matsumura suggests, to improve the glossiness property of the layer, provide precise coating and improve drying property of the layer [0012].

8. In one example, Kai teaches coating the base paper at a coating speed of 500m/min, and the invention of Kai is not limited to one example. However, Shay teaches a coated paper for gravure printing, wherein the coating is provided at a coating speed of 4000ft/min [1219m/min] (col. 14, line 40).

9. Kai and Shay are analogous art because they are from the same field of endeavor that is the coated paper art. At the time of the invention, it would have been

obvious to a person of ordinary skill in the art to apply the coating at a higher coating speed, and the motivation would be, as Shay suggests, to reduce the water forced into the substrate (col. 13, lines 24-25), and to increase production of the coated paper without damaging.

10. Claim 8: Kai does not teach the base paper contains amorous silicate in an amount of 3-12% by weight. However, Ryu teaches a paper containing silicate [0010] in an amount of 3 or less weight % [0011], wherein the amount over laps with the claimed value of 3-12%. Kai and Ryu are analogous art because they are from similar problem solving area in relation to base paper. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the silicate of Ryu with the invention of Kai, and the motivation would be, as Ryu suggests, controlling coefficient of friction and printing opacity of the paper [0011].

### ***Response to Arguments***

11. Applicant's argument is based on that neither Kai nor Matsumura teach or suggest that coating rannability can be improved as in the present invention; therefore, Kai and Matsumura are not combinable. This argument is not persuasive because the fact that Applicant uses the coated paper for a different purpose does not alter the conclusion that it's use in a prior art article would be *prima facie* obvious from the purpose disclosed in the references. *In re Lintner*, 173 USPQ 560.

12. Applicant also argued that Ryu is different from the present invention in paper type; therefore Kai and Ryu are not combinable. This argument is not persuasive for

the following reason. Examiner shows above that Kai and Ryu are from similar problem solving area, in which case Kai and Ryu do not have to be from the same filed of endeavor. Similar problem solving area considers how inventions or their components are viewed apart from the Applicant's field of endeavor. An Examiner can view the modifying of a reference as the solving of a problem. The problem equals the difference between the base reference and the claim.

13. Applicant further argued that neither Kai nor Shay teach or suggest that coating rannability can be improved as in the present invention; therefore, Kai and Shay are not combinable. This argument is not persuasive because the fact that Applicant uses the coated paper for a different purpose does not alter the conclusion that it's use in a prior art article would be *prima facie* obvious from the purpose disclosed in the references. *In re Lintner*, 173 USPQ 560.

14. For the above reasons claims 6 and 8 stand rejected.

15. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kai et al. (JP 2002-088679) in view of Sasaki et al. (JP 11-279990), Ryu et al. (US 2001-288690) and Shay et al. (US 5,478,602).

16. Claim 6: Kai teaches a coated paper for gravure printing provides a coated layer having pigment and an adhesive on a base paper. The coated paper for gravure printing is characterized by providing a coated layer containing 50 parts by weight or more (based on 100 parts by weight pigment) of kaolin as the pigment, having particle diameter distribution contained in an amount of  $\geq 65\%$  in a range of 0.4-4.2  $\mu\text{m}$  based on

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volume (abstract). Kai further teaches that an organic pigment may be contained in the coating composition [0014]. Kai does not teach a hollow pigment as the organic pigment.

17. Sasaki teaches a gravure printing paper containing a paper and a coating layer having a hollow organic pigment provided on the paper (abstract), wherein the hollow pigment has a particle size of 0.4-2.0  $\mu\text{m}$  [0016], in amount of 3-15% by weight [0014].

18. Kai and Sasaki are analogous art because they are from the same field of endeavor that is the gravure coated paper art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the hollow organic pigment of Sasaki with the invention Kai, and the motivation would be, to enhance the ink receiving property of the layer.

19. In one example, Kai teaches coating the base paper at a coating speed of 500m/min, and the invention of Kai is not limited to one example. However, Shay teaches a coated paper for gravure printing, wherein the coating is provided at a coating speed of 4000ft/min [1219m/min] (col. 14, line 40).

20. Kai and Shay are analogous art because they are from the same field of endeavor that is the coated paper art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the coating at a higher coating speed, and the motivation would be, as Shay suggests, to reduce the water forced into the substrate (col. 13, lines 24-25), and to increase production of the coated paper without damaging.

21. Claim 8: Kai does not teach the base paper contains amorous silicate in an amount of 3-12% by weight. However, Ryu teaches a paper containing silicate [0010] in an amount of 3 or less weight % [0011], wherein the amount overlaps with the claimed value of 3-12%. Kai and Ryu are analogous art because they are from similar problem solving area in relation to base paper. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the silicate of Ryu with the invention of Kai, and the motivation would be, as Ryu suggests, controlling coefficient of friction and printing opacity of the paper [0011].

### ***Response to Arguments***

22. Applicant's argument is based on that neither Kai nor Sasaki teach or suggest that coating rannability, sheet gloss, print gloss and dot qualities can be improved as in the present invention; therefore, Kai and Sasaki are not combinable. This argument is not persuasive because the fact that Applicant uses the coated paper for a different purpose does not alter the conclusion that its use in a prior art article would be *prima facie* obvious from the purpose disclosed in the references. *In re Lintner*, 173 USPQ 560.

23. For the above reasons claims 6 and 8 stand rejected.

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24. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kai et al. (JP 2002-088679) in view of Hayashi et al. (JP 06-235194), Ryu et al. (US 2001-288690) and Shay et al. (US 5,478,602).

25. Claim 6: Kai teaches a coated paper for gravure printing provides a coated layer having pigment and an adhesive on a base paper. The coated paper for gravure printing is characterized by providing a coated layer containing 50 parts by weight or more (based on 100 parts by weight pigment) of kaolin as the pigment, having particle diameter distribution contained in an amount of  $\geq 65\%$  in a range of 0.4-4.2  $\mu\text{m}$  based on volume (abstract). Kai further teaches that an organic pigment may be contained in the coating composition [0014]. Kai does not teach a hollow pigment as the organic pigment.

26. Hayashi teaches a gravure printing paper containing a paper and a coating layer containing a hollow organic pigment provided on the paper (abstract), wherein the hollow pigment has a particle size of 0.5-3.0  $\mu\text{m}$  in an amount of 2-30 parts by weight [0004].

27. Kai and Hayashi are analogous art because they are from the same field of endeavor that is the gravure coated paper art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the hollow organic pigment of Hayashi with the invention of Kai, and the motivation would be to enhance the printing property and glossiness of the layer.

28. In one example, Kai teaches coating the base paper at a coating speed of 500m/min, and the invention of Kai is not limited to one example. However, Shay

teaches a coated paper for gravure printing, wherein the coating is provided at a coating speed of 4000ft/min [1219m/min] (col. 14, line 40).

29. Kai and Shay are analogous art because they are from the same filed of endeavor that is the coated paper art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the coating at a higher coating speed, and the motivation would be, as Shay suggests, to reduce the water forced into the substrate (col. 13, lines 24-25), and to increase production of the coated paper without damaging.

30. Claim 8: Kai does not teach the base paper contains amorous silicate in an amount of 3-12% by weight. However, Ryu teaches a paper containing silicate [0010] in an amount of 3 or less weight % [0011], wherein the amount overlaps with the claimed value of 3-12%. Kai and Ryu are analogous art because they are from similar problem solving area in relation to base paper. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the silicate of Ryu with the invention of Kai, and the motivation would be, as Ryu suggests, controlling coefficient of friction and printing opacity of the paper [0011].

### ***Response to Arguments***

31. Applicant's argument is based on that neither Kai nor Hayashi teach or suggest that coating rannability can be improved as in the present invention; therefore, Kai and Hayashi are not combinable. This argument is not persuasive because the fact that Applicant uses the coated paper for a different purpose does not alter the conclusion



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that its use in a prior art article would be *prima facie* obvious from the purpose disclosed in the references. *In re Lintner*, 173 USPQ 560.

32. For the above reasons claims 6 and 8 stand rejected.

### ***Conclusion***

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS

April 11, 2008.

/Betelhem Shewareged/  
Primary Examiner, Art Unit 1794